

METHOD OF AND SYSTEM FOR MODULATING AND DEMODULATING A COMMUNICATION SIGNAL USING DIFFERENTIAL QUADRATURE PHASE SHIFT KEYING (DQPSK)

ABSTRACT OF THE DISCLOSURE

5 A system for and method of modulating and demodulating a
communication signal using differential quadrature phase shift keying
(DQPSK) can include, upon receiving an inbound communication signal,
demodulating the inbound communication signal by obtaining $\pi/4$
differential quadrature phase shift keying (DQPSK) symbols, translating
10 the $\pi/4$ DQPSK symbols into quadrature phase shift keying (QPSK)
symbols, and mapping the QPSK symbols to a pair of bits. Upon initiating
an outbound communication signal, the system and method can include
modulating the outbound communication signal by obtaining
communication bits indicative of the outbound communication signal,
15 translating the communication bits to three communication bits, and
mapping the translated bits to DQPSK symbols.